

"inner core shell"- Correction Required

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CLAIM REJECTION UNDER 35 U.S.C. § 112 AND §102

- 1(a). Claim 1 is [was] rejected under U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. {Excerpt};
- 2(b). Claim 1 also recites [recited], in line 2 "an outer layer or layers", in line 9, "a membrane, partition, chambers or capsule" and in line 12, a means to break, tear, open or otherwise affect said membrane. Is applicant saying that there is more than one outer layer? Is the applicant claiming more than one way to activate invention? Therefore, claim 1 is render indefinite.
- 3(c) Claim 1 is [was] rejected under 35 U.S.C. §102(b) as being anticipated by Newcomb et. al. (USPN 4695055)

CORRECTION TO OFFICE ACTION SUMMARY

- Applicants through their agents/common representatives and attorneys-in-fact, hereby offer Exhibit "A" included with this Response, as answers to the foregoing Objections within the Office Action Summary;
- 2. Original filing of application number 09/927,035 is hereby modified by figured drawings attached within Exhibit "A" for consideration, clarification and better illustration of patent being sought for approval by applicants;
- 3. Applicants hereby incorporate a Foreign Patent filing with this Response on form PCT/RO/101 for consideration with the initial filing of application, for incorporation and consideration to pending application for patent;
- 4. Applicants hereby seek approval of submitted materials for application number 09/927,035 and the related foreign filing application from USPTO by its Response and compliance with the objections noted in the Office Action Summary to their initial filing.

WHEREFORE, applicants respectfully request that approval be granted in their favor and proceed to review and approval of their foreign filing either jointly and severally. ANDERSON, PHILIPS, DAVIS & HOFFMANN, DATED: September 17, 2002 Mr. R. A. Anderson, Managing Partner Attorneys-In-fact/Agents and Common Representatives for Applicants: Christopher Redwine and Matthew Schoenfeld and Twilight Golf Balls, LLC.

9991036100-1254791.1

DESCRIPTION – FIG. 1 – EMBODIMENT

The embodiment of the chemiluminescent golf ball of the present is illustrated in FIG. 1 (cross section). The golf ball is comprised of (1) an outer layer of translucent polymer material common to golf ball construction, (2) an inner core shell, also of translucent polymer material; encapsulating (3) chemiluminescent liquid component A, (4) a breakable partition of glass or brittle plastic, and (5) chemiluminescent liquid component B.

DESCRIPTION - FIG 2a and 2b - EMBODIMENT

The embodiment of the chemiluminescent golf ball of the present invention is illustrated in FIG 2a (cut-away view), and FIG 2b (cut-away view), before and after activation.

The components of the chemiluminescent liquid (6 and 8) are held separate by a partition (7), all of which are encapsulated within the inner core shell (9). An outer layer(13) of translucent polymer material commonly used in golf ball construction wholly encapsulates the core.

The embodiment of the chemiluminescent golf ball illustrated in FIG 2b (cut-away view), shows the ball when sufficient external force is applied. So as to compresses the ball, and rupture the partition (12), thereby allowing the chemiluminescent liquid components, A and B, to mix (11), creating light, which is transmitted through the outer layer (13).

OPERATION

The manner of using the present invention is by the application of external force, (e.g. striking the golf ball with a golf club), sufficient to cause the golf ball to compress and the partition within the core to rupture, and allow the chemiluminescent liquid components to mix and create the active chemiluminescent liquid mixture. When activated, the golf ball of this invention is luminescent and more clearly visible to the eye in low light conditions, as well as having properties of spin, distance, and flight characteristics similar to standard golf balls.



Patent Application of

Twilight Golf Balls LLC

For

TITLE: ABSTRACT

CROSS REFERENCE TO RELATED APPLICATIONS

Not applicable.

FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

This invention is not in any way involved with Federally sponsored research or development.

FIELD OF INVENTION

This invention pertains to a luminescent or illuminated golf ball, having an encapsulated chemiluminescent lighting device, for evening and nighttime use, and to be made more visible in low light conditions.

BACKGROUND OF INVENTION AND PRIOR ART

As any golfer knows, it is typical for golf courses to remain open and for play to continue as long as there is sufficient daylight. Most courses also have special rates for twilight play, as it is understood that the golfer must try to finish a round as daylight is running out, and may not be able to finish at all as it can become too dark to play before the round can be finished. Under such conditions, a golf ball, which is slightly more than one and half inches across, can be very difficult to see at a distance and the possibility of losing a ball in the course of play is greatly increased.

Prior art attempts to overcome this problem have included several variations, making use of different light sources, such as electric lighting elements, lightsticks, as well as attempts in which photostorage material is mixed into the ball's cover material.

OPERATION

The manner of using the present invention is by the means of activation by applying an external force (e.g. striking the ball with a golf club) sufficient to cause the partitioning element encapsulated within to rupture so as to mix chemiluminescent compositions A and B and create the active chemiluminescent mixture. When activated, the golf ball of this invention is luminescent and more clearly visible to the eye in low light conditions, as well as having variable properties of spin, distance, and flight characteristics similar to standard golf balls.

CONCLUSION AND RAMIFICATIONS

Accordingly, the reader will see that the luminescent golf ball of this invention can be of great use to golfers seeking to finish a round of golf at twilight, play at night, or in other low light conditions as their ball would be made more visible and less susceptible to being lost in darkness or shadows. The present invention also allows for storage for long periods of time prior to use, and can be activated easily and quickly to be made ready for use. Also, because of substantially even weight distribution of the self contained lighting source, the present invention can be made to perform similarly to standard, non-luminescent golf balls, thus, and not sacrificing ball performance.

Although the description above contains much specificity, these should not be construed as limiting the scope of the invention, but merely providing illustrations of some of the presently preferred embodiments of this invention. For example the partitioning element can have a variety of different shapes and be positioned in a number of different ways.

CLAIMS:

We claim:

- 1) A spherical, chemiluminescent golf ball comprising:
 - a) an outer layer of translucent polymer material allowing for transmission and diffusion of light;;
 - b) a substantially spherical inner chamber containing two components of a chemiluminescent mixture and;
 - a partitioning element, separating said components of chemiluminescent mixture, which when sufficient external force is applied to the invention, will rupture thereby allowing said chemiluminescent components to mix, and produce light energy;
 - d) A wholly encapsulated inner core shell housing said components of which cause the illumination of the invention;

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 - d) A wholly encapsulated inner core shell housing said components of which cause the illumination of the invention;

CHANGES FOR CHEMILUMINESCENT GOLF BALL:

SUMMARY OF INVENTION

The present invention utilizes a chemiluminescent liquid mixture within the spherical core of the golf ball. The core is enclosed within an outer layer of translucent polymer material commonly used in standard golf ball construction. The chemiluminescent liquid is comprised of two component liquids, separated within the core by a breakable partition, encapsulated within a spherical inner core of a golf ball. Activation of the chemiluminescent components occurs when sufficient external force is applied to the ball to deform the ball and rupture the partition, allowing the chemiluminescent components to mix and create light. The activated liquid will transmit light through the outer translucent layer so as to allow the golf ball to be seen at a distance in low light conditions for a matter of hours, allowing for continued play in twilight or at night.

The uniqueness of this invention is that it is self contained and does not require the use of any additional components or tools, besides applied force to the outside of the ball, and in all other respects will perform like a standard golf ball.

BRIEF DESCRIPTION OF THE DRAWING FIGURES

- FIG. 1 shows a cross section of the chemiluminescent golf ball.
- FIG. 2a shows a cut-away view of the chemiluminescent golf ball.
- FIG. 2b shows a cutaway view of the chemiluminescent golf ball as deformed by the application of external force sufficient to rupture the partition (partition ruptured, chemiluminescent liquids mixed and activated).

REFERENCE NUMERALS IN DRAWINGS

- 1 Outer translucent layer
- 2 Inner core shell
- 3 Chemiluminescent liquid component A
- 4 Partition
- 5 Chemiluminescent liquid component B
- 6 Chemiluminescent liquid component A
- 7 Partition
- 8 Chemiluminescent liquid component B
- 9 Inner core shell
- 10 Outer Translucent layer
- 11 Chemiluminescent liquid mixture
- 12 Ruptured partition
- 13 Outer translucent layer

ABJECTIONS TO LIKENESS OF NEWCOMB, ET. AL. BALL [USPN 4695055]

This invention greatly differs from the Newcomb ball (See Revised Figures) by many factors or methods. First, there is no second or external element {a "stick"} as is present in UPSN 4695055. This invention is self-contained, requiring no external apparatus to cause its illumination other than an external force applied to rupture the encapsulated chemical components. This is an extremely key factor in the difference to Newcomb, et. al.'s invention.

Further, there is no **reusable stick** or puncturing affect, *through* the ball to cause illumination thereof. This is quite prevalent in the Newcomb, et. al.'s invention, in order for the product to be engaged. Lastly, this golf ball's illumination is cause by rupturing the chemiluminescent product contained inside of it.

Newcomb, et. al.'s ball contains NO chemiluminescent chemicals within the ball itself. Newcomb, et. al.'s ball is simply a fluorescent ball which illuminates by insertion of an object ("stick") to cause its effects to take place. Without the external ("lighting stick"), Newcomb, et. al.'s ball is without illumination affect or ability.

The distinctions between this invention abstract and Newcomb, et. al. are substantially and remarkably different concepts, features, construction and styles. There is truly no real comparison on any basis for the two golf balls.